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A leadership development seminar for State Directors of Vocational Education was held in Columbus, Ohio on August 6-9, 1968 to provide inservice training for stronger and more effective vocational programs in each state. Each State Director was asked to contribute a one-page report of some special program activity or new innovation to share with other State Directors. This publication contains the papers contributed by 42 states and Puerto Rico. (DM)

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INNOVATIONS
AND
SPECIAL PROGRAMS
IN
VOCATIONAL EDUCATION

PREPARED FOR THE
LEADERSHIP DEVELOPMENT SEMINAR FOR
STATE DIRECTORS OF VOCATIONAL EDUCATION

August 6-9, 1968
Columbus, Ohio

Sponsored by the National Association
of State Directors of Vocational Education
and
The Center for Research and Leadership Development
in Vocational and Technical Education
The Ohio State University
Columbus, Ohio

VT007826

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FOREWORD

The National Association of State Directors of Vocational Education expresses its sincere appreciation to the Center for Research and Leadership Development in Vocational and Technical Education at Ohio State University for making it possible to hold a Leadership Development Seminar for State Directors at the Christopher Inn in Columbus, Ohio, August 6-9, 1968. The Association is most grateful to Dr. Robert E. Taylor, Director of the Center, and Dr. Aaron J. Miller, Coordinator of Development and Training, for their fine contributions in the planning and development of this most successful seminar.

The Association also expresses deep appreciation to the Task Force of State Directors who were appointed at the State Directors meeting held in conjunction with the American Vocational Association Convention in Cleveland last December to plan and conduct a Leadership Development Seminar for State Directors during the summer of 1968.

The Task Force was composed of Byrl R. Shoemaker, Ohio, Chairman; J. R. Cullison, Arizona; James L. Reid, Maryland; Charles M. Dunn, Tennessee; and George L. Sandvig, Virginia. This Task Force held meetings in Columbus, Ohio and Washington, D.C. in the early spring; and with Dr. Aaron J. Miller of the Ohio Center, developed the program for the seminar.

Although quite a few Directors had conflicting responsibilities at the time the seminar was held, they did send representatives from their staffs, and some forty states were represented.

As a part of the program, each State Director was asked to bring or send to the seminar a one-page, typewritten report of some special program activity or new innovation that he would like to share with other State Directors. These reports were presented during the seminar and are included herein. This publication includes only the special reports and is not a complete seminar summary.

It is our hope that this most profitable Leadership Seminar is only the beginning of a series of in-service training programs for State Directors that will bring understanding, knowledge, skills, and inspiration in building stronger and more effective vocational programs in each of the states. At the same time, the sharing of ideas and new innovations has great potential for developing and conducting a more effective national program of vocational education as we attempt to provide high school, post-high school, and adult students with the necessary occupational skills that are needed to meet the ever-growing manpower needs of our nation.

R. D. Anderson, President
South Carolina

Cecil E. Stanley, Vice President
Nebraska

Paul M. Hodgson, Secretary-Treasurer
Delaware

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ALABAMA

ARTICULATION OF VOCATIONAL PROGRAMS AT SECONDARY, POST-SECONDARY, AND JUNIOR COLLEGE LEVELS

This is a matter presently under study and planning but not yet implemented. It is unique and certainly innovative in Alabama.

The plan is to bring together (a) appropriate junior college officials and teachers, (b) appropriate post-secondary vocational school officials and instructors, and (c) appropriate secondary school officials and vocational teachers to work out a plan of articulation. Using the area of electronic data processing as an example, the plan will work as follows:

A high school student might enroll in electronic data processing in which he could get experience and instruction in the operation of the basic machines--key punch, sorters, collators, printers, verifiers, etc. This same student might move right into a post-secondary school for a course in computer programming. He might then move into junior college for a course in systems analysis, etc. The object will be for each succeeding institution to know what the previous institution teaches and give the students full credit, thus shortening the time for completion.

Quite naturally some students, upon leaving each institution, can and will enter employment at that level. But the important fact will be that we hope the way will be opened for students to move on up to higher levels of employment without being required to take certain courses over and over and be able to move through each institution in less time.

Electronic data processing is only one example. We believe we can work out such articulation in practically all occupations, particularly between secondary and post-secondary programs. The plan is to develop a total curriculum through the junior college--all concerned will come to an agreement of what each level of institution can do and do well within the time limitations and other limiting factors. We will agree upon what can be accomplished at the secondary level, at the post-secondary vocational school level, and the junior college level. Students moving from one level to the next with a transcript will be accepted and given full credit for what was completed.

You can readily see that to do this we will have to work the plan out occupation-by-occupation. This will involve not only the instructors and school officials, but also craft and advisory committees for each occupation.

We believe such a place will result in a steady flow of students from secondary vocational programs into post-secondary programs and on into terminal vocational programs in junior colleges. This will help solve the recruitment problem and also help to raise the educational level of the work force. It will eliminate useless duplication of efforts and silly competition and conflicts.

This plan does not, at any level, remove the main objective of the course--preparation for employment. We will insist that students coming out of the secondary program be employable at least at our entry level. Those coming out of the post-secondary program should be employable at a higher level. Those coming out of junior colleges should be employable at a still higher level.

We will eventually work out a similar plan of articulation to include our basic vocational programs at ninth and tenth grade levels.

ARIZONA

ARIZONA UTILIZES DATA PROCESSING FOR ENROLLMENT AND FOLLOW-UP

Special enrollment procedures have been developed for gathering needed data for vocational enrollment and follow-up. A handbook explains the step-by-step procedure for teachers to use in having students accurately fill out the major source document, the enrollment card. The basic information requested on the enrollment card is:

Instructor's Name	Sex
School Semester and Year	Age
Student's Name	Grade Level
Social Security Number	Occupational Classification
Course Title Code	Other Vocational Education Courses
	Most Permanent Address

Teachers receive an updated print-out twice during the school year. They verify, add or delete the appropriate information. The total amount of their time for updating enrollment print-outs and follow-up is between three to four hours in a year's time.

Vital data for many comparisons and study by the State staff and local personnel is available from the enrollment and follow-up data. This data supplies:

Class Size Number	Number Continuing in the Program
Number Completing the Program	Number in Related Occupation
Grade Level of Students	Number in Unrelated Occupation
Drop Out Rate	Number Unemployed

The data available is supplied to school administrators through Decision Maker Conferences. The local teacher receives complete print-outs of enrollment and an individual-by-individual report on follow-up by class and school.

Arizona has developed a state-wide follow-up that encompasses:

1. A mark sensing card for students to return in a postage paid envelope.
2. A teacher's lesson plan guide with ten overhead transparencies to explain follow-up and the need for an accurate response.
3. The names and addresses of the actual students to follow-up, which are supplied from the enrollment data.

Information for State and Federal reports are quickly and accurately available from our data bank of enrollment and follow-up information.

ARKANSAS

THE IN-SERVICE TRAINING PROGRAM FOR VOCATIONAL AGRICULTURE INSTRUCTORS

An organized program of in-service training for vocational agriculture instructors in Arkansas was started during the summer of 1957. The highly successful program, which has as its purpose the upgrading of teachers who are on the job, is held each summer at Camp Couchdale, the State FFA Camp, which is located on beautiful Lake Catherine near Hot Springs.

In order to include instruction in areas of greatest need, a survey is made each year. When the areas have been selected, each State staff member is assigned responsibilities of securing the persons to do the teaching and buying of instructional supplies for the courses for which he is responsible.

Courses offered during the past years include swine production, beef cattle production, livestock judging, forestry, land judging, pesticides and herbicides, gasoline engines, surveying, farm welding, farm buildings, sketching and draving, general farm mechanics and others. Several courses are included each summer, and the vocational agriculture teachers are divided into interest groups, each teacher selecting the area of training in which he feels that he needs upgrading.

The teachers arrive at camp on Monday morning of the workshop week and stay until Friday afternoon. Camp facilities include meeting places for each group, a large kitchen and dining hall, twenty cabins with individual beds, and fishing, swimming and other recreational equipment for entertainment when classes are not in session.

Instructors for the courses are selected from private industry, state agencies, and from college staffs within the state. Many of the most interesting and most practical instructors have been specialists in such industries as The Arkansas Power and Light Company, the Olin-Mathieson Chemical Corporation, the Portland Cement Company, Monsanto Chemical Company and the Lincoln Welding Company. Other instructors have been employees of the State Forestry Service, the Agricultural Extension Service, and State Health Department and state-supported colleges.

Attendance at the workshops is not compulsory; however, approximately 90 per cent of our teachers who are not in summer school participate. Offerings are for three weeks and teachers may attend as many as three. No college credit is given except for the three weeks Farm Mechanical Service Course which is offered at the graduate level through the University of Arkansas.

Agriculture is a rapidly changing field. Teachers who are well trained when they graduate from college and enter the teaching field are soon outdated if an effective in-service training program is not utilized. We, in Arkansas, feel that ours has filled a definite need and have plans for its continuation in the years ahead.

CALIFORNIA

CURRICULUM DEVELOPMENT THROUGH OCCUPATIONAL ANALYSIS

PURPOSES

To compile, through community survey, performance specifications for multioccupational classifications.

To analyze performance specifications to determine necessary components for the development of individual skill units.

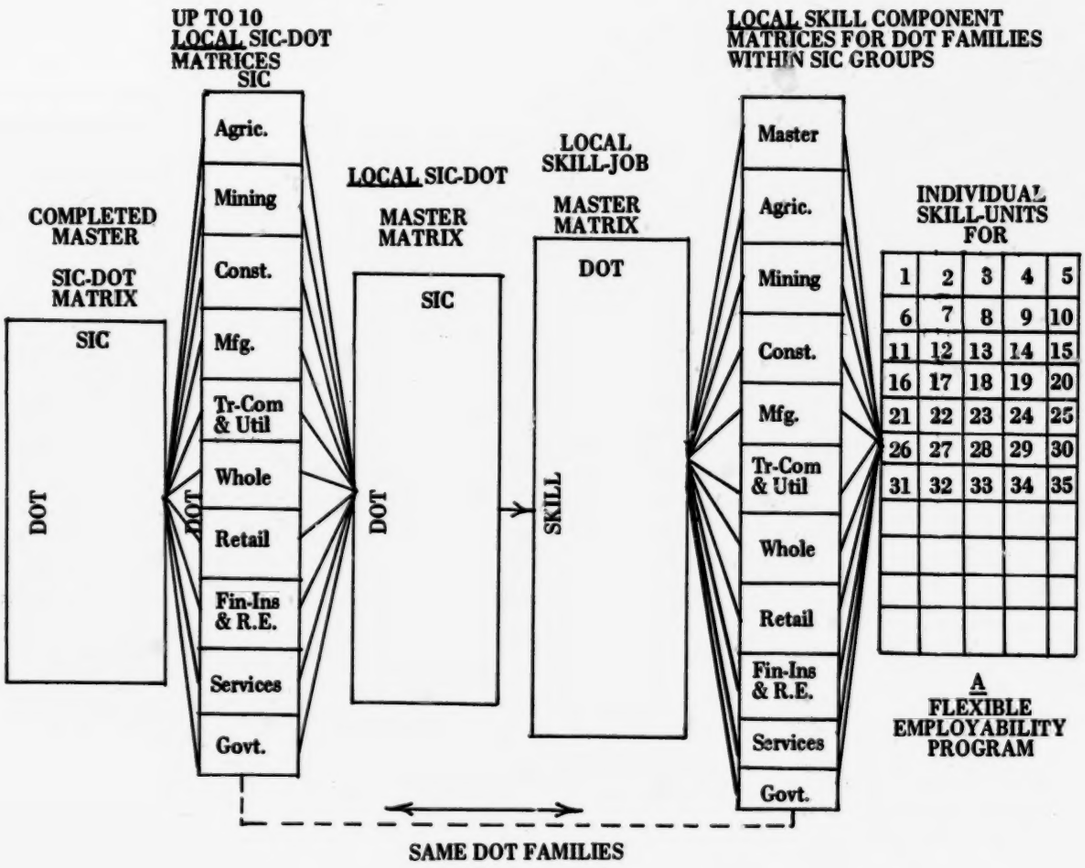
DESCRIPTION

Initially an occupational survey was conducted and data gathered from local employers and selected graduates. The purpose of this survey was to determine overall employment patterns and performance specifications in the local area. From this analysis a local skill-job matrix was developed for multioccupational programs.

This type of orientation brought into focus the multioccupational and "commonalty" aspects of the instructional programs.

Within this frame of reference a curriculum team will develop a multiphased interdepartmental approach to occupational preparation. This will involve development of individual skill units to enable students to meet the entry requirements of specific occupations.

What follows is a flow chart for the described process:



LOCATION OF PROGRAM

Riverside Unified School District
3954 Twelfth Street
Riverside, California 92501
Contact: Arthur Smith, Director, Occupational Survey

COLORADO

COLORADO VIEW (Vocational Information for Education and Work)

PURPOSE

To provide school students, grades 7-14, and others with current, pertinent, usable occupational information concerning less-than-baccalaureate-degree occupations as found in Colorado.

LOCATION

The program is developed in the State Office, utilizing a full-time information specialist and technical writer, and is implemented in local schools throughout the state.

DESCRIPTION

Colorado adapted VIEW from San Diego County, California (where it remains a county project) and expanded it to a state-wide project. The completed project will ultimately contain information on approximately 250 occupations, especially those for which training is available in public institutions in the state, and those which are "demand" occupations.

Simply stated, information is gathered from many pertinent sources, synthesized, and placed on microfilm aperture cards called "VIEW Cards." Each card holds four 8½" x 11" sheets of information. These cards are distributed by the State Office to all schools equipped with microfilm readers (the State Office offering partial reimbursement for the purchase of a reader).

Students use the microfilm reader to study the occupational information contained on the VIEW cards. (Some schools are equipped with reader-printers which enable the student to print out copies of current occupational information which he might wish to take home and study.)

VIEW readers and decks (the total of all occupational aperture cards) may be located in school libraries, counselors' offices, and at other sites where students may have easy access to occupational information when they want it.

Each occupation is described on two aperture cards. Card I (National Card, green color) contains information about the job as it is generally found in business and industry, including job description, job requirements (aptitude, education and training, physical activities), restrictions, economic returns, prospects and opportunities, and job advancement information.

Card II (Colorado Card, pink color) contains additional information about the job as it pertains specifically to Colorado, such as projected needs, specific training institutions and length of time required, short- and long-range prospects, salary range, and specific resource persons who can be visited, or who will visit individual groups to impart first-person occupational experiences.

In addition, other resources pertaining to the specific occupation, such as films, filmstrips, records, tapes, books, and periodicals which might be contained in a basic occupational resource center, will be listed.

All VIEW cards will be revised at least every two years to insure that current information is contained in the VIEW deck. The revision date is printed on each card. As schools receive the revised card for inclusion in the VIEW deck, the outdated card will be destroyed. VIEW cards will be developed and distributed for new occupations as they emerge.

Over one-half of Colorado's secondary schools and community colleges are enrolled in the VIEW project. The remaining schools are expected to join during the current year.

Area vocational guidance consultants hold in-service training for local guidance and administrative personnel to teach, to up-date competencies in use of VIEW and to facilitate enrollment of youth into area vocational-technical schools.

CONNECTICUT
THE NAUGATUCK VALLEY INDUSTRIAL COUNCIL
MACHINE TRADES OPPORTUNITY PROGRAM

Connecticut's fifteen vocational-technical schools annually supply the state's machine and tool industry with graduates who complete the regular three-year secondary program. The program herein described demonstrates a successful joint effort of industry and vocational education to expand this supply by offering an intensive and quality training offering to those graduating high school seniors who, for one reason or another, have insufficient skill to make genuine entry into the Connecticut labor force.

The program now operating (summer, 1968) is offered in a third school at Ansonia and awards all successful completions in all three schools with a bonus of $150 for the eight-week effort. This bonus is awarded by the Naugatuck Valley Industrial Council, Inc.

The close working relationship between the Division of Vocational Education and industry is well-illustrated in the supplement below. Also in evidence are the many ingredients necessary for any good vocational program: expression of need, recruitment, interviews, testing, selection, training, placement and follow-up.

Future planning indicates an expansion not only of this program to other regions in Connecticut, but of the concept itself to other trades.

SUPPLEMENT

PLAN OF OPERATION

1. Program must be developed to meet specific industrial needs.
2. Survey of the critical occupations to be served. (Toolmaker, Tool-and-Die Maker, Machinist, Mechanical Draftsman, Semi-skills such as Automaticscrew, Handscrew, Eyelet Press, Toolsetters, etc.)
3. Secure fixed commitments for placement in formal apprenticeship or other formal training programs for those who satisfactorily complete program.
4. Plan specific program content.
5. Secure cooperation of vocational training division of the State Department of Education in securing schools for training. Supervision, instructors, materials, etc.
6. Secure cooperation of state employment service for interviewing, testing, screening and referral of qualified applicants.
7. Secure cooperation of school administrators and guidance counselors in reaching graduating high school seniors--and juniors--who are not higher education bound.
8. Group meetings of students at schools. Describe program brochures, visual-aids. Speakers recruited from industry--preferably from those who have served apprenticeships and advanced to responsible positions earnings, intraining--at completion. Opportunities for advancement.
9. Interested students file declaration of interest.
10. Refer interested students to state employment service.
11. Students who qualify on test apply for admission to the program.
12. Applicants referred to vocational training schools for summer program. Program under complete control of technical school.
13. Representative from industry maintains close contact, advises students of placement opportunities, makes appointments for interviews for placement.
14. Graduate successful candidates; Certificate from State; Certificate from industrial group; Cash stipend from industrial group.
15. Follow-up placements by industry.

FLORIDA

INDUSTRY SERVICES UNIT HELPS NEW AND EXPANDING INDUSTRIES

An Industry Services Unit was established by the Florida Legislature during the 1967 session to help the state become more industrially competitive with its neighbors in the Southeast. The Unit is a part of the Division of Vocational, Technical, and Adult Education of the State Department of Education. It was established to provide services to new and expanding business and industry which could not be provided through the regular vocational education program supported by the state's Minimum Foundation Program.

Training activities of the Unit are designed to supplement the basic vocational programs being conducted in high schools, area vocational-technical centers, adult centers, and junior colleges. However, these facilities may be used, if available and appropriate, to provide the necessary training. In short, the Unit is intended to provide special planning services and "crash" training programs needed in any part of the state by new and expanding business and industry to meet established production schedules.

In carrying out its responsibility, the Unit will conduct labor market field studies in localities where an industrial expansion is planned or a new industry will locate to determine availability and competence of the local labor supply. Personnel will work with industry in analyzing manpower and recruiting needs and in establishing training programs which will provide trained personnel when needed according to the industry time-table. In addition, teacher-training services will be provided and "tailor-made" courses prepared, including necessary specialized instructional materials and teaching aids. Specialized equipment for training programs will also be purchased and made available as needed. Training programs are designed to prepare skilled and semiskilled employees and will not exceed one year in length.

When fully operational, the Unit will consist of a director and assistant director, a labor market analyst, labor market field men, several industrial engineers and curriculum resources specialists, a project coordinator, a technical writer, a technical illustrator, a research specialist, a personnel consultant, a coordinator of equipment procurement and control, and an accountant, supported by a clerical staff, warehousemen and riggers, and a programmer with ready access to computer capability.

A seven-member Industry Services Advisory Board was also established by the Legislature to assist the state superintendent in carrying out the provisions of the Act. Members include the Director of the Industrial Division of the Florida Development Commission who serves as chairman, the chairman of the Florida Industrial Commission, and five members appointed by the governor and confirmed by the Senate. The Assistant Superintendent for Vocational, Technical, and Adult Education serves as executive secretary of the Board.

The Industry Services Unit is of special significance because it is a vehicle for achieving close cooperation between public education and industry and provides for participation by several state agencies in services and training at the time that they are needed by new and expanding industries.

GEORGIA

TRADE AND INDUSTRIAL CURRICULUM REORGANIZATION PROJECT

PURPOSE

The reorganization of the Trade and Industrial Curriculum Project has as its purpose the development of one state T and I curriculum and the training of T and I coordinators and supervisors to implement the curriculum they develop. Reorganization of the T and I curriculum on a quarter basis will enable area schools to train more people and to operate at maximum capacity the year round, rather than just in September.

DESCRIPTION OF THE OPERATION

A joint project of the Vocational Education Division of the Trade and Industry Department of the University of Georgia, the T and I Curriculum Reorganization Project is a two-phase project. In Phase One, 70 instructors-coordinators of high school and post-high school T and I programs met twice a month to develop job description and task analysis for each T and I subject area. These instructor-coordinators then returned to their respective schools to formulate plans for revising the curriculum with instructors in their local schools. A one-week meeting for all instructor-coordinators involved in the project was scheduled for developing and printing final revisions to all T and I subject area manuals. Phase Two of the T and I reorganization project has two major objectives:

1. To arrange the major and minor blocks of Phase One into an organized course of study.
2. To identify existing curriculum materials that seem to be the most appropriate in teaching the relative subject for each occupational area.

Implementation of the revised T and I curriculum in Phase Two will be facilitated by the in-service training which all high school and post-high school T and I instructors experience during their Phase One meetings with T and I instructor-coordinators.

LOCATION OF THE PROGRAM

The T and I Curriculum Reorganization Project met twice a month in Macon, Georgia. In addition, a one-week meeting was held in Clarkesville, Georgia, for final revising and printing of T and I project manuals.

IDAHO

AN INTER-SCHOOL DISTRICT VOCATIONAL SKILL DEVELOPMENT PROGRAM

PURPOSE

The program is designed to meet the educational needs of borderline students and dropouts from school districts located in a geographical area within commuting distance of each other. The objective is to develop the occupational skills of the enrollees for successful job entry and to prepare the individual to assume normal social relations.

PROGRAM OPERATION

1. A preliminary survey of eight school districts revealed many students unable to compete in the academic area because of socio-economic and mental handicaps.
2. The students were, in general, hostile and in conflict with the home, school and society. A number were dropouts and had police records.
3. Cooperating agencies are: eight school districts, the Department of Employment, the Learning Center for Exceptional Children, employers, and the State Department of Vocational Education.
4. Vallivue School District No. 139, Caldwell, Idaho is the sponsoring district. The sponsoring district assumes responsibility for:
   a. Maintenance of records and personnel files.
   b. Providing necessary facilities.
   c. Providing and directing the services of a teacher-coordinator.
   d. Supervision and conduct of the classroom activities.
   e. Accountability for students referred and placed in the program.
   f. Screening and counseling of students in cooperation with the Caldwell Exceptional Child Center and the Department of Employment.
   g. Consummation of parent, trainee and employer agreements with school district.
   h. Preparation of job analysis and on-the-job instruction program.
   i. Selection of training stations to meet individual need.
   j. Preparation and summation of reports and records as required.
   k. Continual evaluation of student's progress and training programs.
   l. Acquisition of regular employer-trainer reports on student progress.
   m. Follow-up on students completing or leaving program.
   n. Issuing certificate of completion to indicate student's capabilities for employment.
5. The cooperating school districts are responsible for:
   a. The referral of students.
   b. Providing for transportation.
   c. The payment of tuition for their participating students.
   d. Consultation and cooperation with the sponsoring district, advisory committee, employers and teacher-coordinators.
6. Employer responsibilities are to:
   a. Provide a work-training program, proper instruction and supervision of the student-trainee.
   b. Cooperate with the teacher coordinator in correlating the on-job and classroom instruction.
   c. Provide safe and healthful working conditions.
   d. Pay the student-trainee in accord with the competency of the student.
7. State Vocational Department:
   a. Provides consultative and supervisory service.
   b. Assists in financing and the excess costs of conducting the program.
   c. Evaluates program.
8. Employment Department:
   a. Assists in counseling and testing.
   b. Placement for employment.
9. The Learning Center for Exceptional Children:
   a. Assists in counseling and testing.
   b. Provides special audio-visual equipment.
   c. Assists with remedial teaching.

GENERAL INFORMATION

1. Students are 16-21 years of age, in-school or out-of-school youth having mental, physical, emotional, and socio-economic handicaps.
2. The teacher-coordinator was selected on the basis of being able to work with the students. He is a retired young businessman and reserve army officer without a degree in education or any educational experience except as flight instructor in the service. He wins the support and respect of students, parents, employers and all with whom he works.
3. Nineteen students were enrolled. Sixteen of the students had been involved in infractions of the law to some degree--five of the sixteen were on probation, and one was a ward of the court.
4. Instructional methods were informal, relaxed and practical.
5. Earnings varied from 50 cents to $2 per hour.
6. At the end of the year, fifteen students were employed. One had been placed in the State Youth Training School for wayward youth.
7. The program has been a success. It is reasonable to believe that nearly every one of the students would have continued to be a school and social problem without the program, whereas nearly all have taken positive steps towards becoming responsible, productive citizens.
8. The teacher-coordinator will continue periodic contact and supervision of students completing the course and will be available for consultation.

ILLINOIS

WESTINGHOUSE AREA VOCATIONAL CENTER - A METROPOLITAN CONCEPT

The Westinghouse Area Vocational High School is being developed to make vocational education available to youth and adults in all twenty-seven districts of the City of Chicago, and to youth and adults from suburban school districts unable to obtain occupational education within their school-community. The school is designed to develop and carry out new instructional patterns in occupational education to insure a saleable skill for every student who can be accommodated within the school who will seek gainful employment with less than a baccalaureate degree.

APPROACH

A new and imaginative approach is being developed wherein the incoming students without vocational skills are enrolled in occupational clusters. Each cluster affords a broad degree of occupational preparation and at the same time provides the student a saleable skill after forty weeks of training.

The vocational cluster program is designed to provide education in skills and concepts common to clusters of closely related occupations. The curriculum is being developed through analysis of the common features of the occupations. In-depth learning experiences and techniques seek to correlate those found in industry.

Ten of these occupational clusters have been identified for instructional purposes for September of 1968.

1. Automotive industries
2. Office Occupations
3. Marketing Occupations
4. Electrical Occupations
5. Electronic Occupations
6. Graphic Occupations
7. Metal Working Occupations
8. Health Occupations
9. Food Processing and Service Occupations
10. Home Economics Related Occupations and Personal Service Occupations

The curriculum under development is responsive to the common and specialized needs, problems, and interests of the students. These students are to be counseled regularly and permitted to retain control of their educational destiny throughout the period of their enrollment, thus allowing flexibility in programming and increasing the holding power of the school. If interest is maintained and the educational approach functional, the students will not leave school prior to the attainment of a saleable skill.

The training of the intellect is achieved through the functional approach. Students know that the school develops skills, secures placement, and provides follow-through counseling. This functional approach to education will keep many students in school until they complete this program. However, since people are motivated to accomplish objectives at different times, a student who leaves school prior to program completion or graduation will be considered on furlough so he may return for further education and skill development.

OPERATIONAL PRACTICES

1. Secondary school students on full-time or part-time attendance patterns will spend three or more periods per day in an occupational field or occupational cluster. During the first two years the curriculum will center around development of employment skills and competencies in occupational clusters or families of closely related jobs. These programs, listed in the appendices of the proposal, are designed to provide students with development of occupational skills, related and technical knowledge, positive work attitudes, and work practices transferable from one occupation to another.
2. Students on a shared-time basis will transfer their credits earned (approximately one-half of their high school load) to their home school. Students on a full-time attendance basis will spend approximately one-half time covering three or more periods, with the balance of their programs in a related or supportive academic area, carried out at the Westinghouse Area School.
3. An important service of this school will be the utilization of a human resource laboratory, through which each student will be given intensive guidance and counseling relative to vocational programs and occupations.
4. By using a module approach to instruction with individualized goals for each student, mastery can be attained within whatever time limits are necessary. There will be a goal of minimum performance of all students at the time of leaving school, and a development of maximum performance among those who remain.

Every effort will be made to insure that no student leaves the school without a saleable skill. Procedures will be developed to establish contractural relationships between the student and his family so that each may know what skill levels can be attained in a prescribed time. They need also know how much more it will take to go on to the next step in the degree of skill attainment through training and education leading toward the acquisition of a diploma and entry into apprenticeship programs or technical training programs.

INDIANA

A "SPECIAL NEEDS" VOCATIONAL PROGRAM OF THE EVANSVILLE-VANDERBURGH SCHOOL CORPORATION

PRACTICAL VOCATIONAL EXPERIENCE AND COOPERATIVE WORK-STUDY PROGRAM

PURPOSES

To better prepare students with special needs to enable them to take their places as responsible citizens in the world of work.

To develop within the student good attitudes toward work, through training in good work habits, adaptation to supervision, routine and adjustment to fellow workers.

To assist low achieving students to develop within themselves, concepts of themselves as productive individuals, which will allow for good work attitudes and habits, a desire to work, and satisfaction in work well done.

To help the student understand basic industrial processes and production methodology.

To develop a controlled working environment in which students in this ability range can learn to work.

To evaluate potential work skills.

DESCRIPTION OF THE OPERATION

The P.V.E. program is designated to help the student who has been slow to achieve in the majority of his school subjects. The primary goal is to help the student succeed. In order that each student may be able to do this, the class operates on a production basis instead of on the project method. The manufactured product is the total effort of every member of the class.

The student is taught to care for the tools, treat them properly and put them away when he is finished. He is taught to stay at his own work station and never to interfere with another student when he is operating a tool or machine. All jobs simulate industry as nearly as possible.

The Cooperative Work-Study Program is the second phase of this endeavor for those with special needs. It is held during the eleventh and twelfth year and provides for one-half day of on-the-job training, with pay, plus one-half day of regular high school subjects including one period per day of related training.

Students have been most successful in this program, many staying in school and completing credits required for high school graduation. Others have taken full-time jobs. All students have been encouraged to, and a great majority have, set up a savings account with one of the local banks. In a great majority of cases, each student was the sole wage earner in his family. Other members of his family were on relief.

LOCATION OF THE PROGRAM

The program started with one high school, but is now included in all five of the public high schools in the Evansville-Vanderburgh School Corporation; namely Bosse, Central, Harrison, North, and Reitz in Evansville, Indiana.

NOTE

More detailed information may be obtained from "A Cooperative Job Training Program for Retarded Youth," Part I and Part II, by Dr. Max Eddy, Project Director, Purdue University, and John Wolford, Project Supervisor, Evansville, Indiana. Copies are available from Purdue University.

IOWA

COOPERATIVE RESEARCH INTERNSHIP

The Iowa Vocational Education Branch with the Research Coordinating Unit has initiated a cooperative Internship Program with Iowa State University at Ames. The cooperative program is on-going in nature, inasmuch as the second intern has just completed his training in the department.

The cooperative venture came about as an outgrowth of a Federally funded educational research training program at Iowa State University. One of the stipulations of the research fellowship program was that the student, prior to receiving the graduate degree, was required to serve a six-month internship with an agency actively engaged in research.

The Research Coordinating Unit volunteered to supervise one intern each six months to help provide this training. The specific objectives under which the Unit functions justify such a program. This cooperative venture provides both pre-service and in-service training for the prospective researcher.

This activity has provided an excellent opportunity for both the research intern and the State Department of Public Instruction. The University provides the individual with research tools, and the internship within the Department of Public Instruction provides an opportunity for the individual to make practical application of this research training. We have found through a free exchange of ideas between the intern and the department personnel that the student is given a first-hand opportunity to grapple with the problems on the state level.

We in the State Department feel that we will benefit by this experience when the individual accepts employment in the field. The prospective employee becomes aware of the problems encountered on the state level; and as we get enough of these people in the field, our position on the state level will be better realized through this experience. This research experience and exposure will undoubtedly expedite communications between the state and local level in the future.

The program also has immediate dividends for the department as well as the students. The department is able to add one more person to the staff to help in the total operation. The interns have helped in compiling research data, developing brochures, constructing survey instruments and other jobs incurred in the department. The nature of the assignments requires the interns to interact frequently with the section chiefs of the various service areas. This creates a broad understanding of vocational education for the prospective researcher.

This activity is taking place in the Research Coordinating Unit, Vocational Education Branch, Department of Public Instruction, Des Moines, Iowa.

KENTUCKY

VOCATIONAL EDUCATION FOR 500 ECONOMICALLY DEPRIVED YOUTHS IN KENTUCKY

The Division of Public Assistance, Department of Economic Security, and the Bureau of Vocational Education, State Department of Education, are pursuing a joint project. This effort grew out of a demonstration project proposal to find financial resources for recent high school graduates from public assistance families to pursue vocational education. Mrs. Ann Hall Taylor, Assistant Director of the Division of Public Assistance, initiated a project and submitted it for funding. Such demonstration projects receive their funds from the Department of Health, Education, and Welfare under the authority of the Social Security Act, Section 1115, added by Public Law 87-543, effective July 25, 1962. This approved project will grant $50 per month for each of 500 needy students for a period of one year and may be approved annually up to three years. Research done by field staff of public assistance has identified almost 800 students with educational potential who are requesting vocational training. These students are located in all areas of the state with large numbers in three particular areas: Hazard, Mayo, and Louisville.

The Department of Economic Security has begun testing these students to assist in placement. A tremendous program of handling individuals is in progress. These are some of the activities: (1) finding training slots in the desired courses in the thirteen area vocational schools, (2) considering ways and means of adding additional programs within the present vocational budgets, (3) locating housing facilities for these students, and (4) transferring students from their home area into other sections of the state where training slots are available.

An innovative project is emerging to assist those who may be trained in one section of the Appalachian Area. This creative idea is being initiated by Robert Sloane, Assistant Director of Trade and Industrial Education, Bureau of Vocational Education, who happens also to be a member of the board of the Lot's Creek Community School. This school, located within six miles of the Hazard Area Vocational School, has a director, board members, and contributors who are dedicated to the educational advancement of mountain youth. Approximately fifty students can be given living facilities, social enrichment, and opportunities for earning some of their expenses.

The coordinator of special vocational programs, Mrs. Christine W. Wallace, is seeking other creative ways of serving this large group of youth with special needs who desire vocational education.

LOUISIANA

HOMEMAKER AIDE, BASIC TO CLOTHING AND FOOD SERVICE, WAGE EARNING

LOCATION

Evangeline Area Tri-Parish Vocational School, St. Martinville, Louisiana

DESCRIPTION

The Home Economics Section of the State Department of Education and the Evangeline Area Tri-Parish Vocational School, in cooperation with the St. Martin Parish Welfare Office, initiated a program for women who were eligible for subsistence under Title V of the Social Security Act. The Title V project went into effect in an attempt to provide training and work experiences for unemployed heads of households with minor children to enable them to enter the labor market.

The objectives of the program were:

1. To orient trainees to the nature of work and desirable personal qualities for job success.
2. To develop competent skills in basic housecleaning, home laundry, sewing, food preparation and food serving.
3. To develop knowledge of the cause and prevention of home accidents and assist in home care of the sick.
4. To develop the ability to handle emergencies and meet people outside the family.

Fifty-nine heads of households, who were currently receiving public assistance, entered the program for which a special course outline and syllabus were prepared. Persons approved for this training who had less than eighth grade education were given special supplementary pre-vocational training in English, reading, and mathematics in addition to basic home economics until they reached an equivalent of eighth grade level or to a grade level required for their chosen trade. The average educational level of the trainees was first or second grade.

A follow-up report of eighteen trainees who completed the training indicates the following: two work as nurses aides with average monthly salary of $208; one works as a dietary aide with an income of $180; one works as a home health aide with an income of $130; one works as a homemaker aide earning $130; four are employed as food processors earning an average of $243; one works part-time as a short order cook earning $106; one works as a sales clerk in a women's apparel shop earning $106; three women are unemployed due to lack of transportation facilities; two are unemployed due to health reasons; and two are available for work. It is interesting to note that none of these people have ever held any responsible jobs in their lives other than taking care of their families.

The guidance counselor helped to place the trainees, coordinate transportation and visit the trainees on the job and at home.

As a result of the training received, many of the trainees are being removed from the welfare rolls at a sizable savings to the welfare program; others are having their subsistence reduced also at a savings to the welfare program. Therefore, it is reasonable to assume that the program is meeting the needs of the individual, industry, state, and nation. By providing better educational background and training, this program equips the trainees with knowledge and skills for positions in the world of work and lifts them out of the poverty bracket.

MAINE

MARINE TECHNOLOGY PROGRAM

PURPOSE

To produce skilled technicians for various types of work connected with the sea.

DESCRIPTION

The Marine Technology Program at Southern Maine Vocational Technical Institute has enjoyed favorable response and considerable success. There is a demonstrated interest in all phases of oceanography in the State of Maine and the S.M.V.T.I. is looked upon as a leading school in the country in certain areas of marine studies.

The course, as we have been conducting it within the past few years, is designed to produce skilled technicians for various types of work connected with the sea. This involved practical ship operation, along with rather intensive involvement in marine biology and oceanography. Under ideal circumstances, our marine technology students have spent approximately forty days per school year at sea on our training vessel, the Aqualab. Regular oceanographic stations have been maintained by the program and with the aid of special oceanographic equipment, material has been gathered for later shipboard and inshore observations in accordance with methods prescribed by the United States Navy Oceanographic Data Processing Center in Washington, D.C. Laboratory work has included salinity and oxygen determination by titration. Related laboratory work has included the construction of various graphs, plots and profiles from the data recorded by station observers on the oceanographic log sheets. Many laboratory techniques relating to this particular type of work are also included as part of the course. In addition, students are trained in laboratory and field to identify many species of marine plant and animal which are important to man.

This year for the first time we will introduce a program more directly focused on marine biological and oceanographic phases of the ocean sciences. There are a large number of indications that a graduate of this program will become increasingly important as the marine industry accelerates its sophisticated approaches.

The associate degree is awarded in the three primary areas of marine studies. These are: marine diesel engineering, deck and seamanship, and biology and oceanography.

MICHIGAN

VOCATIONAL TEACHER TRAINING - A REVISED PROCEDURE

For quite some time many vocational educators from the state universities, as well as the State Department staff, have been concerned that funds being allocated to vocational teacher training were not being utilized in the most efficient manner. In an effort to improve the quality of vocational teacher training, a new procedure is being attempted this year.

Beginning July 1, 1968, 40 per cent or approximately $90,000 of the $225,000 which is allocated annually to vocational teacher education in Michigan's eight approved institutions will be devoted to special teacher training projects. These projects are submitted by the teacher training institutions and approved by the Division of Vocational Education. In preparation for the implementation of this policy, the teacher training institutions were asked to submit projects last January. Forty-three projects were received from seven of the institutions for a total cost of over $500,000. Due to the limitation of funds, only eleven of these projects could be funded.

The 40 per cent figure, or $90,000, was agreed upon as the amount to be allocated to special projects the first year. After one year of operation, the procedure is to be re-evaluated and a permanent percentage established. The advantages of this procedure over the old, which merely supported individuals on the staff of each of the approved teacher training institutions to teach and provide other services to prospective vocational teachers, are as follows:

1. Provides more flexibility to vocational teacher training activities.
2. Supports research demonstration projects or workshops which might otherwise not be conducted.
3. Minimizes some of the reimbursed teacher training activity provided for all students and encourages the teacher education program to enlarge inter-disciplinary experiences for vocational teacher education students as a regular university responsibility.
4. Allows teacher training institutions the opportunity to concentrate on areas of needed emphasis.

MINNESOTA

FROM SPECIAL NEEDS TO SPECIAL NEEDS

CAR GROOMING

A unique program designed specifically to assist students who find themselves classified in the special needs area is Brainerd Area Vocational-Technical School's program in Car Grooming. The uniqueness of this program does not stem from the environment in which it operates nor the tasks accomplished during the educational experience. What is unique is the pairing of a set of occupational competencies developable in a training experience and a set of tasks completable by persons with limited abilities. Although the program is in its embryo stage, having operated for only one year, the prospects are exhilarating and the potential is yet untapped.

The basic environment in which the program is operated is an auto mechanics shop, with the activity related to this program centered mainly around two stalls in the shop. The training objectives center themselves around instructions on utilizing steam cleaners for cleaning engines; power-driven polishing equipment for waxing, as well as some minor sanding operations; and a very limited amount of touch-up painting. Actual mechanic service work is not included, as it appears at this point in time to be above the ability of the student. The interior of the automobile, as well as the exterior, are the subject of the grooming program involving repairing of padded dashes; cleaning upholstery; removal, cleaning, and replacement of floor mats; and the general overall improvement of the automobile. Tire repair is not a part of the program; however, the physical removal of tires, the blacking of tires through the addition of a coat of tire black, as well as cleaning the interior of the trunk are tasks to which training is directed.

In addition to the manual aspects of the program, some of the greater difficulties encountered are the social problems of the student and his ability to assimilate the environment in which he finds himself inserted. Proper attitudes toward the public as well as his fellow workers is a problem germain to the student of a low mental ability, as well as his inability to assume responsibility and carry a task through to its finish. This program is conducted in cooperation with a vocational adjustment coordinator, a state hospital for the mentally handicapped, and the public schools in the area served by this facility. The program is twenty weeks in length and operates for six hours a day. Students who need and can benefit from such a program are allowed to enroll. Employment opportunities are excellent as the used car service facilities have accepted these people and indicate a need for further assistance of this kind.

AVIONICS

Avionics is a composite term describing the electronics approach to aviation. It is to this specific area that the course objectives at the Alexandria Area Vocational-Technical School are directed. The program is two years in length and covers a myriad of course content ranging from mathematics, physics, electronics, navigation systems, principles of radar, electronic servo systems, circuit theory, flight theory and related subjects to technical reports and customer relations.

Hands-on operations for the avionics students have been provided through the generosity of Northwest Orient Airlines and their contribution of a DC-7 to the school. General aviation and commercial airlines have been extremely cooperative in the implementation of the program, reflecting in this cooperation the great need for persons trained in this specific area. In addition, manufacturers of radios and electronic equipment for the aviation industry need production and installation, testing and maintenance technicians to meet the ever-growing demand in the area of the electronics approach to aviation. Employment opportunities, as reflected through a large state-wide advisory council, have inspired the school to start its second program only six weeks after initiating the first course.

MISSISSIPPI

In Mississippi, it is difficult to point out one "eye opener" activity in vocational and technical education. The complete program has been moving forward with a united front which is probably the basis for the expansion and enrichment of the program.

The adjustment of curriculum to keep the instruction program in tune with the present and future occupational opportunities has been one of Mississippi's outstanding achievements. This has been accomplished through state and local advisory and technical committees and the addition of a research coordinator and a curriculum coordinator. The staff has worked very closely with business, agriculture, industry, hospitals, doctors, welfare departments, etc. in determining needs for vocational education and projecting programs to meet the needs.

When these needs have been determined all forces have cooperated in providing facilities and instruction programs. This coordination has included such other agencies as Title I, Elementary and Secondary Education Act, Economic Development Administration, Appalachian Program, and state and local governments. The contribution made by all of these other agencies has enabled Mississippi to make much progress on a limited amount of vocational and technical education funds.

In meeting these needs, area schools have been developed throughout comprehensive junior college system and through coordinated effort of two or more attendance centers at high school level. When the schools that are now underway are completed there will be twenty-two junior college vocational and technical centers. There is not a boy, girl, man or woman in the state that cannot attend one of these programs, with free transportation provided.

There is in the making about an equal number of high school programs that will provide very comprehensive vocational training for high school students, dropout students and adults. These will serve not only as terminal occupational programs but will be feeder programs for the post-secondary junior college programs.

To assist in carrying out the training program a curriculum laboratory prepares and distributes materials. These materials have been very closely coordinated by the use of technical committees for the various occupations and specialized staff members to work in the curriculum laboratory.

The program has been extended to the correctional institutions, including two juvenile schools and the State Penitentiary. As a matter of fact, vocational and technical education programs will be available to every person in Mississippi regardless of their education, social or economic status, when the program now underway is completed.

Special attention has been given to recruiting and training staff members to administer and supervise the program. The staff coordinates the program for all occupations. It is becoming known as a complete vocational education program and not a segregated program.

MISSOURI

COOPERATIVE TRAINING WITHOUT A SCHOOL BELL

Distributive Education in St. Louis has opened the doors of stores for classes far from the school building. The plan calls for a bus to pick up selected students and take them away from school to spend the full day in downtown businesses. Interested and concerned officials of large companies have expressed a willingness to provide the educational facilities for a group of disadvantaged or non-college bound students. The facilities include the classroom used for training their own employees. The instructor will be an employee of the school district. His instruction, selected to fit the needs of the group, will occupy three hours of each day. It will be designed to remove deficiencies detrimental to securing employment in entry jobs. Attitudes, personal appearances, communication skills, and career opportunities are typical topics to be presented. Store skills or routine duties usually performed by beginners will also be taught.

Following the classroom time, there will be on-the-floor, behind-the-scenes, and over-the-counter experiences. Instructors will supervise students assigned to duties selected and taught by store employees (training sponsors).

The ultimate goal is productivity of students worthy of employment and progress toward a full-time job. The program will enable the student to be economically self-supporting; and if no further education is to be had, they will be able to enter the labor market as taxpaying citizens.

Several business firms are considering the school's request for cooperation. Carefully selected teacher-coordinators are being contacted and counselors are screening potential enrollees. An entire group is expected to come from a single high school for one store. The teacher will be directed by a school employee responsible for all of the city-wide projects.

In one-half day of class time, there will be an attempt to motivate learning by the pending prospects of work for pay. In the other half day, the student will observe employees at their regular jobs. The teacher may explain the processes, question the worker, and give information related to the work being done. This will place the one teacher with a group for a six-hour school day, and the success of each project will depend largely upon that one individual's willingness and ability to serve the youth with special needs.

MONTANA

GIRLS CORRECTIONAL SCHOOL - VALLEY VIEW

The program is a cooperative project between the vocational education division, local vocational-technical center, state correctional school for girls, B.I.A. State Child Welfare, Labor Department, M.D.T. and State employment service.

The program consists of placing the particular student in the occupational training program of her choice at the Helena Area Vocational School.

The purpose of the program is to provide occupational training for those girls (Indian) that have completed their stay at the correctional institute.

We have now progressed to the point where the project will be begun this fall. The biggest barrier to the program now is the location of adequate housing facilities for the girls.

NEBRASKA

LONG-RANGE PROGRAM PLANNING FOR VOCATIONAL EDUCATION IN NEBRASKA

One of the most pressing problems confronting vocational educators, legislators, and other policy makers in Nebraska is that of ascertaining the need for occupational education training programs. The Vocational Education Division found it nearly impossible to find facts and statistics on which to project their program activities as required by the U. S. Office of Education. In the past such projections involved too much "guesswork" and in reality were of but little value. Data on the state labor force were collected under varying conditions, times, and geographical areas. They did not adequately depict the number and kinds of jobs which exist or which will exist in the future. Since our vocational education programs should be geared to the labor market, the need for a reliable indicator of employment opportunities is apparent.

When our Nebraska Research Coordinating Unit (RCU) was first organized, one of its prime objectives was the design and application of a model to obtain, from employers themselves, current and projected data on employment opportunities.

The first step of our Research Coordinating Unit was to identify a complete list of firms within the state that employed people. This was done in cooperation with the State Tax Commission, the Internal Revenue Service, and the State Department of Labor. Included were businesses required to file federal income tax reports in the following tax classes: (1) firms employing one or more persons on which social security was paid and income tax withheld, (2) domestic help, and (3) farms and ranches employing farm labor. In addition (4) all Federal offices in Nebraska, and (5) out-of-state Nebraska employers were included.

The second step was to conduct a 3 percent sample of all firms selected at random by a computer. Names and addresses of the firms were obtained from the computer printout. A questionnaire mailed to the 1,894 firms yielded a 40 percent response. Data from the remaining firms were obtained by personal interview.

Data requested from all firms were: (1) the number of persons presently employed by occupational group; (2) the employers' estimate of the number of employees needed in each occupational group during the next year due to turnover, promotion, expiration, and retirement; and (3) the employers' estimate of employment needs for each occupational grouping in the next three years. The employment data collected were projected by computer to reflect state-wide employment opportunity estimates for each of the 174 job groups.

Recently, our Research Coordinating Unit published their *OCCUPATIONAL OPPORTUNITIES IN NEBRASKA* report dated July 1, 1968. This study has become the basis for Nebraska's Projected Program Activities in Vocational Education for Fiscal Year 1969.

Our RCU people plan to make a 3 per cent random sample survey each year. If errors have occurred in the first year's study, it is anticipated that subsequent years will tend to eliminate such errors and over a period of years will result in a means by which we will always have available up-to-date information as to occupational opportunities in Nebraska.

Research Coordinating Units or State Boards of Vocational Education interested in securing a copy of the 1968 *REPORT OF OCCUPATIONAL OPPORTUNITIES IN NEBRASKA* should write to

Nebraska Research Coordinating Unit for Vocational Education
University of Nebraska
302 Agricultural Hall, East Campus
Lincoln, Nebraska 68503

NEVADA

THE COOPERATIVE TRAINING PROGRAM IN HIGHWAY ENGINEERING TECHNOLOGY

PURPOSE

Combining the advantages of both theoretical training and practical experience, this program is sponsored jointly by the Nevada State Highway Department and the Southern Nevada Vocational-Technical Center with two purposes in mind. The first is to locate capable technicians who want to study Civil Engineering Technology and who will need to work part-time to finance their technological courses. The second and long-range purpose is to encourage thoroughly trained engineering technology graduates who have developed a keen interest in highway work to undertake the solution to the problem of the shortage of qualified technicians in this field.

HOW THE PROGRAM WORKS

Trainees start to work for the Highway Department after having completed approximately 225 class hours of instruction. This work period will continue until the beginning of the next semester of the technical school. At the technical school the trainee will study such subjects as Properties of Highway Materials, Technical Drafting, Technical Mathematics, Technical Physics, and Communication Skills. While working for the Highway Department the trainee will be assigned to a Resident Engineer as a rodman, chainman, or Materials and Testing Technician. After completion of two semesters, or approximately 450 class hours, the trainee will be advanced in work status and salary compensation. He will be assigned work as an inspector on construction or as a Materials and Testing Technician in a laboratory, as a draftsman, or to a location crew. While at the technology school he will study such subjects as Construction Methods and Equipment Mechanics, Surveying and Measurements, Technical Mathematics, Technical Physics and Communication Skills. Upon completion of the third and fourth semesters, when the trainee has completed his school courses, he will be offered a position with the Highway Department as an Engineering Aide II or Materials and Testing Technician I, depending upon needs of the Department and the graduate's desire.

WHO IS ELIGIBLE?

To be eligible for this program an applicant:

1. Must be a citizen of the United States.
2. Must be the son, daughter or ward of a citizen of Nevada, or a citizen of Nevada himself.
3. Must be enrolled in the Southern Nevada Vocational-Technical Center as a Civil Engineering Technology student.
4. Must have completed satisfactorily with a grade of "C" or better, 225 clock hours of instruction.
5. Must be a graduate of an educational program making him eligible to enter the Southern Nevada Vocational-Technical Center or the equivalent (GED).

ADVANCEMENT IN WORK STATUS AND SALARY

Students desiring to enroll in this program, if qualified as mentioned above with 225 clock hours of instruction in Civil Engineering Technology, will be accepted as an Engineering Student Aide I, salary grade 20. To advance in salary stature the student must complete another 225 clock hours of instruction and will be advanced to Engineering Student Aide II, salary grade 21. It is possible for students to be accepted at the higher level providing they have met all the necessary requirements and have completed two semesters, or 450 block hours of instruction.

PLACEMENT

The Southern Nevada Vocational-Technical Center enrolled seventeen students last fall on a full-time basis, and fourteen completed the first block of approximately 400 hours training.

All fourteen students were employed by engineering firms, county and city municipalities.

NEW PROGRAMS

Programs for the 1968-69 school year are being implemented at the Elko Community College, Elko, and Washoe County School District, Reno.

NEW HAMPSHIRE

POST-SECONDARY PROGRAMS FOR PERSONS WITH SPECIAL NEEDS

THE VIP PROGRAM
VOCATIONAL INSTITUTE PREPARATORY

Some of New Hampshire's most deserving young men and women are those receiving the least attention in the educational system. These are the general students who are being overlooked as the nation alternately focuses its spotlight on the extremes in the ability scale. The upper echelon are provided advanced placement, special financial aids, and glory while every agency operating is fighting for the right to aid the extreme disadvantaged. In the middle, we have a large segment of our youth who are frequently condemned to mediocre courses of questionable value and who, upon graduation, find they are neither qualified to work nor qualified for more education; and in some instances, they do not know which area they wish to enter. Some, however, show real ability for post-secondary education; but they cannot achieve at a level that would guarantee their success due to poor study habits, a poor background in math or science and most important, a complete lack of understanding of their own problems, initiative and ability.

The purpose of the VIP Program is to help these young citizens secure the necessary background to enter post-secondary vocational training with a reasonable chance of success or help them identify the right avenue of opportunity for their future travels.

The program is taught by members of the regular faculty who have expressed a desire to participate in this special program. Eventually, additional personnel may be added if sufficient numbers of enrollees can justify the expenditures.

Courses include:

1. In-depth orientation and counseling
2. English, math and physics
3. Blueprint reading
4. Reading skills
5. Study skills
6. Library skills
7. Vocational problems laboratory
8. Experiences in the major area of interest, such as machine shop, electronics, culinary arts, etc.

Evaluation or grading is done by a personal statement in letter form to the parent by each instructor. These are "no holds barred" statements, honestly (perhaps for the first time) telling the parents of the student's progress and ability in the subject.

At the end of the year a pass or fail grade is given. If a student passes he is guaranteed admission to the regular two-year institute program. If he fails it is hoped that sufficient guidance has been given to assist the individual to seek the proper employment, other educational program or activity.

This program was developed by the staff of the New Hampshire Vocational Institute, Berlin, New Hampshire as a means of doing more for the youth who desires admission to a post-secondary educational program. More information, including a more detailed explanation, copies of report forms and other data, can be secured from: Mr. Edward Oleson, Director, or Mr. Lawrence Twitchell, Coordinator of Admissions, N. H. Vocational Institute, Milan Road, Berlin, New Hampshire.

NEW YORK

ACCESS TO OCCUPATIONAL EDUCATION THROUGH SHARED SERVICES

PURPOSES

Shared service programs are organized to establish adequate pupil base and economic base for justifying broad offerings in occupational education in an administrative structure assuring accessibility of vocational education to all pupils in an area.

DESCRIPTION

New York State has had Boards of Cooperative Educational Services for twenty years. These were established after it became apparent that individual districts, even the larger centralized schools, lacked the pupil base to justify comprehensive offerings in occupational education. The early growth of shared programs was slow and happenstance.

The impetus of the Vocational Education Act of 1963 has made this shared service vehicle come to fruition for the first time and to the extent that some fifty-five area vocational programs have been approved. These were based on a series of state-wide studies of need and the development of comprehensive programs of occupational education providing a broad choice of training opportunities to students. Right now outside the "Big Six" Cities, all but part of one county in the state are a part of one of these area programs.

By September, 1969, every youngster in the state who has an interest in an occupational program will have access to it.

Shared service area programs are conducted at centers to which pupils are transported for approximately a half day of vocational education. The general education subjects are offered in the home schools, and the pupils get credit and are graduated from their home districts. The centers have both morning and afternoon shifts. Programs are arranged primarily for the upper two years of high school. Special needs and certain other programs may vary from this.

Prior to May, 1967, the Boards of Cooperative Educational Services were without authority to construct facilities. Since that time, twenty-three applications for area vocational facilities have been received. A referendum of all voters in the component districts is required. The success of these referendums, with one exception, has been in the affirmative ranging from 3-1 to 9-1 and has demonstrated the interest of the public in support of occupational education in a year when more local school budgets have been voted down than at any time in history.

The studies of need and the structuring of coordinated long-range program planning have been effective in the utilization of Vocational Education Act funds as seed money for program extension.

NORTH CAROLINA

VOCATIONAL EDUCATION EXPERIMENTAL PROGRAM IN A COMPREHENSIVE HIGH SCHOOL

LOCATION OF THE PROGRAM

Independence High School, Charlotte/Mecklenburg Board of Education, Charlotte, North Carolina.

PURPOSE

1. To develop a more flexible vocational curriculum which enables students to receive instruction in other vocational areas which are related to his major field of interest (occupational mix).
2. To use team teaching in providing more effective instruction in areas which are common to all vocational fields (commonalties).
3. To increase teacher efficiency by team teaching areas which are common to several vocational areas.
4. To provide more vocational guidance, especially in relation to selecting instructional units in other related vocational areas.
5. To provide students opportunities to explore resource materials related to occupational education and/or remedial resource materials in basic education in a learning resources center.

DESCRIPTION OF THE OPERATION

Vocational education students in grades 10-12 in this comprehensive high school identify the vocational course desired and the broad career objective to be pursued in the spring of the school year prior to the implementation of their program. One of the three specialty teachers is designated as coordinator for all activities and is assigned on a non-scheduled basis. She interviews the student to determine the needs that he might have in his eventual occupation and not to be covered in the specific course selected. The student is then placed on flexible scheduling within his vocational hours at school. In this manner the student is allowed to substitute instructional units in other vocational areas in place of units in his regular vocational course. For example: The data processing student recognizes a need for some expert training in basic electricity--impulses, switches, relay circuits, etc. This student is provided certain release time to move into the electricity/electronics classroom for individualized or group instruction under a second specialized teacher qualified in Trade and Industrial Education. This instruction could occur on successive days or on a broken schedule. A third specialty teacher provides the same type of services in the Business and Office Education area. Through this coordination, the student becomes better qualified and learning becomes related and transferable. Remedial needs can be met in the same manner.

Recognizing that there are certain common areas applicable to most of the vocational areas, the coordinator worked with the entire vocational faculty in determining the topics to be taught in a team teaching situation. The large group instructions, called "commonalties," were given at various intervals during the year. The dates were discussed and agreed upon by the vocational faculty. Knowing when the commonalties would be scheduled enabled teachers to plan their regular class instruction so that a break of a few days would not disrupt their specific class learning. Classes ranged from fifty to 120. Large group instruction was done by teams of vocational teachers and resource people from the business community. Small group follow-up with individualized research and instruction was immediate.

Evaluation of the program has been coordinated by the North Carolina Research Coordinating Unit in Occupational Education.

NORTH DAKOTA

A DEMONSTRATION PROJECT FOR THE BLIND*

Can blind persons be trained alongside sighted students in a trade-technical school and then be sent out to compete for jobs in the industrial world?

A demonstration project seeking an answer to this question has completed its third year at the North Dakota State School of Science at Wahpeton, North Dakota. So far, teachers, students, and employers feel that the program is developing a "yes" answer. One evidence of the affirmative answer is that six of the seven blind students who were the first to complete the two-year machine shop course last spring are working in competitive industrial jobs and doing well in them.

You may ask if these men learn to operate machines like metal lathes and milling machines. Yes, exactly that and more. The quality of their work is excellent by comparison with their sighted fellow students and their safety record is exceptional. The six graduates hold varied jobs. A totally blind, married student from Rock Island, Illinois, is employed by the John Deere Company in East Moline, Illinois. A married man with two teenage sons is working in a privately-owned machine shop in Waterloo, Iowa. A twenty-three year old South Dakota farm boy is employed by the Cessna Aviation Company in Wichita, Kansas. A talented folk singer from Kansas is a machinist with the Westgo Manufacturing Company of West Fargo, North Dakota. A fifth graduate, a former Navy man, is a quality control inspector on the Apollo moon project. This, as far as we can determine, is a first in this type of work by a blind person.

How did this unusual training program get its start? And how was it that the State School of Science at Wahpeton was selected for this pilot project?

First, it is a cooperative venture of Federal and State vocational rehabilitation programs to determine the effectiveness of a regional trade-technical training program for the blind at an established and recognized trade school. Industrial and educational leaders have long recognized that the major difficulty in placing blind persons in competitive industry jobs is that qualified and trained blind candidates for jobs were not available. Besides the handicap of lack of vision, blind persons more often than not found that they had to be better qualified than their sighted competitors to succeed on a job. Therefore, training which was almost impossible to get, was identified as the key to the blind person's chance of becoming a better producer for society.

When North Dakota's director of vocational rehabilitation visited the campus along with representatives of VRA, the idea of enrolling blind students in the school was talked over by the school administrators. With somewhat of a "I'm going to have to see it to believe it "attitude, school authorities decided to try this new approach for training blind persons.

The North Dakota State School of Science is operated primarily for North Dakota residents but accepts students from nearby areas. In this special project, the fifteen students enrolled in the spring term came from North Dakota, Oregon, Florida, New Jersey, Illinois, and Indiana.

The blind students are given no special favors--and they ask for none. They spend forty hours a week in shop and classroom instruction, the same as other students in the trade-technical courses. About half the time is spent in the shop while the remainder is spent on related subjects, such as communication skills, business fundamentals, applied science, industrial relations, sales psychology, mathematics, welding, and metallurgy. They work and study in the same area and at the same time as regular students and observe the same rules.

The only significant difference is that the blind students have individual instruction in their major course areas such as machine shop and the small engine mechanics course. Class notes are taken in braille and the textbooks are all tape recorded. One of their two shop teachers is an experienced instructor of the blind; the other is a veteran teacher of auto mechanics.

The blind students are all men, ranging in age from eighteen to fifty-five. Two students have guide dogs to lead them around campus and accompany them to class. Others, also totally blind, make their way with the aid of a long white cane.

What do graduates and students say about the program? One graduate, who hopes some day to train other visually handicapped persons, believes that the no-sympathy-for-the-blind attitude in the classrooms and shops makes blind students better students. Another says that being put in classes with sighted people "is the best thing they could do for us because blind people, if they intend to go out and work, will have to live and compete with sighted people. This is the place to learn how to do just that."

A twenty-one year old student, in his second year in small engine mechanics, is confident that his courses--which include theory and practical repair and maintenance of two- and four-cycle engines, electric arc welding, blueprint reading, and salesmanship--will prepare him for running his own repair shop some day.

Class instructors have observed that the determination and initiative shown by the blind students often amazes and encourages sighted students in the same shop area to do better. "There's one thing about these (blind) boys," they note. "They don't goof off a bit. We can't find a job they can't do. Once we transmit a mental picture of the job to be done to their minds, your job is practically done."

The employer of one of our graduates told us: "He runs the lathe and drill press and assembles equipment. In fact, he runs just about any machine we have in our shop. I would be more than willing to take on more of the blind graduates if they are qualified workers and come anywhere near this man's abilities."

*Adopted from "Can the Blind be Trained with the Sighted," Vocatio, Volume 1, No. 5, January, 1968, pages 24-26.

OHIO

RESIDENTIAL SCHOOLS FOR YOUTH AND ADULTS

PURPOSE

To provide pre-employment skill training, technical knowledge, work habits, work attitudes, remedial education and rehabilitation services to disadvantaged youth and adults in preparation for employment in our technological society.

DESCRIPTION OF OPERATION

Two separate centers are operated in Ohio with assistance from funds under the Manpower Development and Training Act to meet the needs of disadvantaged youth. These centers were organized prior to the establishment of the Job Corps but serve the needs of disadvantaged and out-of-school youth and adults in the manner planned for in the Job Corps. Such centers are operated effectively and more economically than are many of the present Federal Job Corps centers.

A. *Mahoning Valley Vocational School*

Mahoning Valley Vocational School is located on an active Air Force base, which serves the purposes of weekend training in aviation. This center was selected because it offered the possibility of residential facilities at a reasonable price, since part of the cost of the maintenance and utilities of the unit are borne by the Air Corps. The residential facilities used are abandoned dormitories, and the educational facilities were built inside of existing storage buildings and hangers on the base. The eating facilities are provided by the former officers' club, and recreational facilities are enhanced by the availability of a gymnasium. The membership in the residential school was limited to 450 students since it was determined that twenty different areas of vocational education offerings could be provided with this student base.

The remodeling of the dormitories was made possible by a grant from an industrialist in the Youngstown area through the organization of a private educational corporation. The administration of funds and the educational program was initiated under a local Board of Education until it was determined that such operation was illegal under Ohio school law. Such laws have since been changed and, as a Joint Vocational School District is organized in the county in which the Mahoning Valley unit is located, the administration will come under such a Joint Vocational School District.

After the first year of operation in which the skill training, technical instruction and remedial education proved effective, the services of vocational rehabilitation were added because of problems of youth which extended beyond the sphere of education. Vocational rehabilitation determined that over half of the youth enrolled in Mahoning Valley had identifiable physical or mental problems which made them eligible for rehabilitation. Percentage of completions in the first class was low, approximately 55 per cent. The percentage of completions has climbed gradually and it is now over 70 per cent. A much higher completion rate would be established if we were to count as completed those who left the center for a job before the completion of the program.

B. *Southern Ohio Manpower Training Center*

This residential center was located in the heart of the sparsely populated "hill" counties of Ohio. Since there were no vocational centers in the area, there was little opportunity to train the out-of-school youth and adults. This center is located in an abandoned factory building of one company and satellite buildings of another company adjacent to the site. This center maintains an enrollment of about 250 students and offers approximately twelve vocational programs for youth and adults, including both men and women. Students attending this training center live in private approved housing in the town rather than in a dormitory.

Excellent results have been achieved in both of these centers:

Mahoning Valley Vocational School
U. S. Air Force Base
Vienna, Ohio

Southern Ohio Manpower Training Center
South and Main Streets
Jackson, Ohio

OKLAHOMA

OKLAHOMA STATE-WIDE COMPUTER SCIENCE SYSTEM

PURPOSE

To train data processing technicians

LOCATION

Spectra 70/35 at the Data Center in Oklahoma City; RCA 301's at Oklahoma City, Tulsa, Okmulgee, Wilburton, Duncan, Lawton, Miami, Altus, and Enid

DESCRIPTION

One of the critical shortages in business and industry is adequately trained technicians to fill positions as computer programmers and systems analysts. This problem is magnified by the continuous development of more complex and advanced data processing equipment and techniques. Since education and preparation of technical manpower is a functional responsibility of educational institutions, an increased demand is being placed on technical institutes, junior colleges, and area vocational-technical schools to expand their programs to include data processing technology.

The Oklahoma State Department of Vocational-Technical Education approved a plan to meet this challenge. The plan provides for data processing technology programs at a number of locations in the State with a large computer to be located in Oklahoma City. At each of the wing locations in the State, terminal computing equipment is provided with on-line communication to the Data Center via a voice-grade Western Union line. This equipment operates on-line with the same computing capability as the large Data Center computing system. The schools are geographically located in a manner that permits one line to be shared by two schools, allowing each school to send or receive data one-half of the time. The computer located in the Capitol is an RCA Spectra 70/35E. The computers in the wing schools are RCA 301's. The wing computers also have the capability of functioning off-line with a somewhat limited range of activity.

The system monitors each school to determine if the schools use the equipment as scheduled. Through this type of system, the need for duplicating high cost equipment for each local school is eliminated, the more sophisticated equipment being available through the Data Center. Obsolescence is minimized because the local school's program will always be as up to date as the Data Center's computing system, which will be continually updated. This makes instruction available to students at a very low cost.

The supplier is in the process of installing six Model 381 Magnetic Tape units in each of the participating schools, which will not only greatly increase the student's experience, but will also enable the schools to computerize much of the administrative workload. This will serve to expand the capability of the wing computers when used "off-line."

Because of the complex features of the system and the shortage of personnel qualified to teach in data processing technology programs, it was necessary to establish a special training program to provide teachers for the program. Under the sponsorship of Oklahoma State University, two consecutive summer institutes were held to train interested mathematics and business teachers to teach in these programs. The first two-year graduates have completed the program and those looking for employment have been employed. Some have elected to continue their education. The major difficulty has been retaining students in the program to completion, as numerous offers have been made to enrollees prior to completion.

The Oklahoma State-Wide System is unique in several respects: (1) It was the first state-supported program set up exclusively to train data processing personnel; (2) Training is accomplished on third-generation equipment; (3) Students gain invaluable experience on an elaborate data communications network usually found only in large universities and industries; and (4) The students are learning the fundamentals of programming and system operation with "hands-on" experience, not just from a text.

OREGON

PROGRAM DEVELOPMENT, ARTICULATION, AND COORDINATION

DEVELOPMENT OF BASIC GUIDE

The recent completion, Oregon Board of Education approval, and distribution of the Guide to Structure and Articulation of Occupational Education Programs could mark an important milestone in the development of occupational education in Oregon. The Guide has been designed to provide a unified conception of and general, flexible guidelines for the expansion and improvement of occupational education at all levels throughout the state.

Under development by the State Department of Education staff for over one year--even longer if its total background is taken into consideration--the Guide anticipates many of the more advanced concepts and innovations that are only now beginning to receive attention and gain acceptance at the Federal level and in other states. More important, perhaps, the Guide incorporates these concepts and innovations into a design for implementation. Virtually all those who have become familiar with its content consider this Guide unique, comprehensive, and considerably in advance of developments elsewhere.

The Guide is certainly the first of its kind to: (1) clearly assign to public education the major role in the achievement of the national manpower mission, and to weave this role into its conceptual framework for all levels of the public educational system; (2) approach the problem of integrating academic and occupational education on a broad front rather than in a narrow experimental setting; (3) attack the problem of extending occupational education into the overall education of all students no later than the junior high school years; (4) incorporate fully the concept of educating for entry-level work competency at the secondary level through broad occupational clusters, rather than specific vocational specialties; and (5) develop and incorporate actual cluster-based curriculums designed out of analysis of existing employment needs and opportunities in the state.

Since the Guide to Structure and Articulation of Occupational Education Programs reflects many of the on-going developments in occupational education in Oregon, it is directly connected with much of the material that follows.

DEVELOPMENT OF SECONDARY CURRICULUM RESOURCE MANUALS

The Guide identifies and outlines twelve cluster-based high school curriculums. Each of these is to be supported and kept current through the provision of comprehensive curriculum resource manuals. The purpose is to guide implementation of the curriculums, as well as keep them abreast of and applicable to the changing world of work. Development of these resource manuals, coordinated by the state staff and involving representatives from business, industry, labor, agriculture and education is presently underway.

ARTICULATION BETWEEN EDUCATIONAL LEVELS

The Guide suggests some approaches to the development of the needed relationships between the levels at which occupational education is offered. Building from this base, the state vocational staff and secondary and community college representatives have undertaken a cooperative project to design systematic procedures for identifying and establishing essential articulation patterns.

COORDINATION OF OCCUPATIONAL CURRICULUMS

The Guide outlines flexible guidelines for coordinating curricular offerings at the secondary level. However, the diversity of specialized community college programs requires approaches that are more specifically tailored to particular technical-vocational employment needs, and to the operational situation and capabilities of each community college. The Division of Community Colleges and Vocational Education has completed the planning phase of a task force approach to this problem and is currently involved in its organization and implementation.

PENNSYLVANIA

NOTEWORTHY PROGRAMS
AGRICULTURE

LOCATION

This program is located on a 78-acre farm in West Philadelphia, Henry Avenue and Shawmont, Philadelphia, Pennsylvania.

PURPOSE

A comprehensive agriculture program that will offer occupational training in: (1) production agriculture, (2) agriculture in business and industry, (3) commercial horticulture, (4) agriculture mechanization and automation, (5) animal technician training, (6) meat cutting, and (7) Turf Technology.

DESCRIPTION AND OPERATION

The current school year enrolled more than 400 boys and 100 girls. In addition to a staff of eight certified teachers, a non-teaching, full-time farm manager is employed to meet the needs of the school's 78-acre farm. A full line of farm equipment is available. Facilities include a 40' x 100' dairy barn, 32' x 100' commercial greenhouse, agriculture mechanics shop, four combination agricultural laboratory-classrooms, and a large assembly-type demonstration room. The curriculum has been designed so that the total program of studies includes a full academic program articulated with post-secondary or higher education (college bound) for those who so desire. Follow-up studies indicate that there are many varied agricultural occupations available to persons in the region, and that the program should not be terminal in nature.

It is planned to make the facilities available for extensive in-service training for all teachers of Vocational Agriculture in the southeastern part of the state, as well as the development of adult education.

PUERTO RICO

PUERTO RICO'S COOPERATIVE TRAINING PROGRAM IN THE SHOE INDUSTRY

A cooperative training program involving industry, the Commonwealth Department of Education and other Puerto Rico government agencies has been set up in Puerto Rico for unemployed or underemployed persons, especially disadvantaged youth, in the shoe industry.

The northwest part of the island used to be agricultural, but as farming steadily declined the problem of unemployment became critical in recent years. A population of some 175,000 had no place to go for jobs. Industry hesitated to establish factories where there was no pool of skilled personnel and only a very limited program to supply the need.

A decision to promote the shoe industry, after a study of the area and types of manufacturing best suited to the locality, was based on three factors: (1) The shoe industry would employ a large number of both men and women; (2) There was already a tradition of manual dexterity as the area was once the center of a local handcraft in basket and mat weaving; and (3) Easy, cheap transportation was available.

The Aguadilla Shoe Manufacturing Training Center opened July 3, 1967, for training shoe workers. In the first year more than 750 were trained with 83 per cent now permanently employed. Four-month training sessions are offered in six shoe manufacturing-related occupations. From its start the center has been a cooperative project.

The area today has eight shoe factories with a total potential employment of over 2,000. New factories are Brooks Shoe Company, Endicott Johnson, and Kauffman Shoe Company. Goodrich International and Dorado Shoe Company have expanded in Aguadilla. Thom McAn and Isabela Shoe Company are new in Isabela; and Mayaguez Shoe Company, in Moca, has expanded.

The Puerto Rico Industrial Development Company contracted the services of a full-time shoe industry consultant and made available an industrial building in Aguadilla for the training center. The Employment Security Bureau of the Department of Labor has been responsible for recruiting and screening candidates and for placement of the trainees.

The Area for Vocational and Technical Education, through its Trades and Industrial Education Program, supplies instructors and supervisors for the training center and pays for shop materials, as well as administrative and other incidental expenses. Federal financial assistance is available under the Vocational Education Act of 1963.

Industry has cooperated by furnishing machinery and equipment on a loan basis. Endicott Johnson allows for their supervisory personnel to work with the regular instructors in the training program. Civic leaders in the community have been responsible for program promotion.

Although principal emphasis is on training out-of-school youth and young adults, attention is also given to other disadvantaged persons such as unemployed, unskilled farm laborers, academically handicapped men and women and inmates of penal institutions. The training aims at returning these people to, or bringing them into, the mainstream of Puerto Rican economic and community life, as active participants in our dynamic industrial and economic growth.

So fruitful a training program could never have been developed by industry, government or vocational education alone. Working together, however, this excellent coordination means employment for thousands in an area that traditionally has maintained a high unemployment rate.

This kind of cooperation by industry, government and the local communities is a basic principle in all vocational and technical programs in Puerto Rico as the best way to promote and guarantee the future social and economic well-being of its people.

RHODE ISLAND

DESIGNING A MORE EFFECTIVE STRUCTURE TOWARD COOPERATIVE STATE-LOCAL OPERATION OF VOCATIONAL-TECHNICAL FACILITIES

THE PROBLEM

Programs of vocational-technical education designed to operate within the framework of the comprehensive high school will not produce the best results unless an effective partnership is established between the State Department of Education and the local education authorities.

THE BACKGROUND IN RHODE ISLAND

Historically, locally operated and controlled programs received partial reimbursement through the State, but there existed little firm basis for mutual effort in expanding and improving programs.

THE CARROT

State funds were provided to build a network of regional vocational-technical facilities on campuses of existing comprehensive high schools, and assurances of continuing financial and technical support were extended to the local receiving school committee.

THE STRUCTURE

1. Establishment of Professional Liaison Committees (top school administration) and Area Advisory Committees (regional business, industry and labor leaders).
2. Detailed agreements worked out and negotiated between the State and local education agencies.
3. State builds, equips and maintains facilities on land deeded to it by the local government.
4. State pays salaries of vocational-technical program director as well as salaries of guidance counselors for each 200 students.
5. Local agency agrees to operate the school in accordance with direction from the State. Final decision-making is cooperative.

THE RESULTS

An atmosphere of common interest has been established. A unique relationship has developed based on mutual support, dependence and, believe it or not, on mutual trust.

SOUTH CAROLINA

DEVELOPMENT OF AREA VOCATIONAL EDUCATION CENTERS IN SOUTH CAROLINA

The Area Vocational Education Centers now under development in the state offer a plan to make comprehensive education available to all high school students--those who will enter employment after graduation as well as the college bound students; and to provide continuous educational opportunities for adults to qualify for job skills or to up-grade present skills.

Recent studies showed that students who graduated from South Carolina high schools in recent years represented only 35.2 per cent of those who began school twelve years earlier. The other 64.2 per cent went into a world of work without the benefits of a high school education. Only 32.9 per cent of the graduates entered college, leaving 67.1 per cent to enter employment with only a high school education.

These statistics emphasize the opportunity and responsibility of the public schools to fill this gap for job skill education that will prepare high school students for job entry, and to prepare the high school drop-out and adults for a job, or to up-grade their skills for a better job.

Schools with established vocational departments have been limited by finances, space and equipment to expand into new courses demanded by current times. These limitations have made it difficult for most high schools to provide in a single school system a wide variety of vocational courses to qualify students for job skills required by industry, business, agriculture, and other occupational fields.

Efforts to find a solution to these limitations led to the development of the Area Vocational Center concept. This concept offers a practical plan whereby several schools can cooperatively develop a wider variety of vocational courses, better classrooms and modern equipment conveniently located for the joint use of each school.

The Area Center does not eliminate previously established courses at the local high school, but serves to expand present offerings by adding new courses and special courses that cannot economically be provided by each individual high school.

Area Vocational Center students take basic education subjects at their home school and are transported to the Area Center for vocational instructions and related work experience in the school shops and laboratories. Passage of the 1963 Vocational Act which provided matching funds for construction gave impetus to the Area Center concept. Fifty-two Area Centers to serve all counties of the state have been proposed for construction during the next several years. Eight of these already are complete and in operation at Lancaster, Union, Lower Richland, Pickens, Florence, Hartsville, Aiken and Marion. Six more are complete and ready for operation next month. These are at Camden, Spartanburg, Gaffney, Oconee, Greenwood and Chester.

Construction contracts have been signed for eight additional centers which will be completed and ready for operation in September, 1969. They are Fairfield, Spartanburg No. 2, Allendale, Barnwell, Colleton, Dentsville, Marlboro, and Anderson. The construction cost of the centers, not including equipment, varies from $600,000 to $1,000,000 each.

The Area Center with its new, modern facilities greatly improves the image and status of Vocational Education in a community and brings pride and prestige to the community and the student by dignifying preparation for occupational life.

SOUTH DAKOTA

MULTI-OCCUPATIONAL GUIDANCE

PURPOSE

To prepare high school seniors to enter area vocational-technical schools with a greater degree of confidence in their occupational choices.

DESCRIPTION OF THE OPERATION

The multi-occupational approach will encompass two academic years of preparation. During the eleventh grade, this class will be involved in a one hour per day class in industrial relations. During the twelfth grade, this same group of students will begin an in-depth program of occupational choice through a system of semi-skill training in a variety of occupational areas.

Example: One hour of each day in grade twelve will be devoted to related drafting. Two hours of each day will be devoted to skill training in a particular occupational area. The occupational area will change at the end of each nine week period. There will be a total of four different occupational areas offered to each student during the twelfth grade. The types of curriculum offered will depend on the desires of the students and the competencies of the instructional staff.

LOCATION OF ACTIVITY

This approach is being tried on a pilot basis at the McLaughlin High School, McLaughlin, South Dakota. The program is intended to reach students in rural communities with high school enrollments from 100 to 300 students.

TENNESSEE

ACTIVITIES RELATED TO STRENGTHENING SCHOOL-EMPLOYER RELATIONS

The success of programs of vocational-technical education depend in large measure upon effective cooperative relationships between the school and industry. It is important that more effective ways be found whereby such relationships may be strengthened and made more effective.

A search for innovative means to make such cooperative relationships more significant began in Tennessee at a conference held in Oak Ridge July 11-12, 1967. This conference, the first of its kind in Tennessee, brought together 100 representatives of vocational-technical education, industry, and labor. Participants at the conference cogitated ways by which vocational-technical education, industry, and labor could cooperate in presenting the most realistic, practical vocational training.

This school-industry conference was sponsored jointly by the Tennessee Division of Vocational-Technical Education and the Training and Technology Project located at Oak Ridge. The TAT Project is funded under provisions of the Manpower Development and Training Act and is administered by the Oak Ridge Associated Universities.

SOME RESULTS

Immediate plans for action grew out of the conference. A program was launched for selected students from Tennessee's area vocational-technical schools to receive fourteen weeks of intensive training at the TAT Project. A series of one-week visits to TAT were scheduled for vocational-technical education administrators. Development of similar programs at the local level was begun.

To assist the Project in planning, developing and evaluating the coupled program, educators, representatives of organized labor, industry, government and lay personnel who have the abilities and interest to work toward more effective relationships between vocational-technical education and industry were consulted.

The July conference provided orientation for the series of vocational staff visits to the TAT Project. During these one-week visits, held between September 25, 1967, and January 26, 1968, the vocational-technical education administrators were assigned to study TAT activities in such areas as recruitment, testing, guidance counseling, curriculum development, instructional techniques, and public relations and to devise means of local application in their individual situations. The administrators themselves became students to learn all available data the Project has produced in a continued effort to determine more effective ways in which schools can cooperate with industry and utilize industrial resources.

As a result, each area school will develop a similar project of its own involving local industries. This will entail local industry-labor-vocational education conferences to be patterned after the state-wide Oak Ridge meeting, enlarged cooperative education programs, upgrading of instructors, and other innovations designed to make optimum use of vocational-technical education and industrial training possibilities.

Concentrated, cooperative training programs offer high probability of successfully achieving the maximum amount of training in the shortest period of time. This means a continued close study of industry's needs and job requirements when designing vocational-technical curricula so that instruction will be applicable to the current state of technology and to the existing and anticipated job opportunities.

TEXAS

CONSOLIDATED APPLICATION FOR FEDERAL FUNDING

PURPOSE

There are twenty-seven different, distinct Federal education programs administered by the Texas Education Agency available to local educational agencies within the state. In 1967 the United States Office of Education requested the Texas Education Agency to develop a plan or application whereby local schools might apply for all Federal funds at one time, in a package, thereby encouraging comprehensive local planning and eliminating fragmented planning and reporting. To accomplish the objective of consolidated funding, individuals from local schools and regional service centers were invited to assist the Agency in implementing the "Packaging Concept." The whole packaging concept permits local school administrators to view Federal funds in the light of the total educational program rather than as additional fragmented components.

DESCRIPTION OF OPERATION

Not all schools in the State of Texas use Federal funds. A few school districts use all twenty-seven Federal funds. Most schools, however, use only a portion of the funds for which they may be eligible. In the packaged application, the superintendent of schools is responsible for formulating objectives for each program and projecting the amount of funding from Federal sources his plans require. In order to administer the program, a special division within the Agency was created. This division, Funds Management, has drawn personnel from all departments in the agency--Instruction, Vocational Education, Special Education, Administration, etc. As each local school's application is received, a team reviews the application and makes necessary adjustments according to funds available. This funding procedure permits orderly financing, and the local administrator knows at the beginning of the school year how much money he can plan for.

UTAH

MOBILE OFFICE EDUCATION (MOE)

At the present time, the vocational education programs in rural high schools fail to offer the breadth and depth of instruction desirable for those students who are either terminal or planning to continue vocational-technical training at the post-secondary level.

The purpose of this program is to try to improve the instruction in office practice through the use of MOE, an instructional process known as "simulation," and a master itinerant teacher.

Two identical surplus trailers, each thirty-six feet long, were purchased, modified, and renovated so that when they are parked side by side they open into a single modern office. The interior of the trailers have been decorated, furnished, and planned to look as much like a modern office as possible. Heating and cooling facilities are an integral part of the arrangement. The equipment will supplement that available in the school's classroom, and the environment will be something that the average teacher is seldom able to achieve in a standard school setting.

The mobile unit will play two major roles:

1. *Training itinerant workers.* A summer program lasting three years. The unit moves on site at the Amalgamated Sugar Factory near Lewiston, Utah, for eight weeks each summer. Ages of the students range from twelve to twenty-three; educational background from fourth to twelfth grade. The programs begin with the teaching of basic skills, even as basic as English, simple mathematics, and spelling. Each student starts learning the typing skill as he progresses in other skills. Hopefully, at the end of three years, a "graduate" will have a salable skill in an office occupation. The environment of the classroom has been a great motivating factor in keeping attendance high during the first summer of activity.
2. *A regular school year program.* The mobile classroom will make three cycles between four small rural high schools. Each visit will be two, two, and four weeks in duration. Three separate simulation phases have been written, one for each visit. First, a low level sophistication, scripted input acquainting students with basic office procedures, simulation orientation, equipment orientation, and types of related skills needed in office work. Second, a review of skills partially scripted, office techniques, and more sophistication of office-related situations involving skills, equipment, and office practice. Third, a full scale office simulation involving complete office environment, including skills, equipment, attitudes, office techniques, and inter-personal situations. Supervision will be primarily student-oriented.

Additional roles for MOE in the high schools are adult education, teacher in-service, office orientation for grade school children, and the use of MOE equipment for regular classwork while at the host school.

In the planning stages is the use of MOE on site at the Utah State Prison for training of male and female prisoners in office occupations skills.

Institutions participating in the development of MOE have been the Utah State Board for Vocational Education, Utah State University, Systems Development Corporation, Utah Technical College at Salt Lake, and Utah Mortgage Loan Corporation.

VERMONT

AREA VOCATIONAL CENTERS

When asked to select the best program or operation in the State of Vermont we point to the Area Vocational Centers that are now in operation or are being built or planned. From our point of view, the centers are "top drawer" because they are part of a comprehensive high school. Our philosophy dictates that the entire secondary school population should be together. When we say entire population, we are talking about the full range from educables through the high ability group.

Only in a comprehensive school can a wide variety of offerings be available to meet the needs of each student. This setting makes it possible for the bright vocational student to schedule advanced math and/or science, as well as allowing the college bound student to avail himself of a portion of a vocational offering during free time. A couple of the schools have programmed the mentally retarded students into the regular schedule and facilities. The rest of the schools now in operation and those in the planning stages operate (or will operate) separate programs in a separate suite of labs and classrooms.

The Area Center also provides facilities for adult evening courses. Emphasis is being placed on the need to expand this area of training. When the time for expansion arrives, the Area Centers will provide the base for developing courses for the thirteenth and fourteenth years.

The physical plant of the Area Center can be found as an integral part of the whole school building or as a somewhat separated wing. Other activity centers are usually a part of the wing--such as the cafeteria. Shops can be found on as many as three different floor levels depending on the contour of the land.

There will be fifteen Area Centers covering the state when the program is fully implemented. The Area Center can be a part of a single district high school or a Union High School District. Students from the home school district attend full-time while students in high schools within a fifteen mile radius attend either full-time or on a half day basis, depending on circumstances.

The Area Center operates under the control of the local school board. School boards of sending high schools have no direct control over the Area Center operation. However, they do have the opportunity to make their wishes known through representation on an Area Administrative Advisory Committee.

VIRGINIA

NAME AND LOCATION

A special pre-vocational program to serve selected eighth and ninth grade students in two high schools in the City of Petersburg, Virginia (population 50,000).

PURPOSE

Many students are poorly motivated and perform much below their capabilities because of their lack of interest in the traditional high school program. Consequently, these students graduate with inadequate preparation for today's labor market. Other students become so dissatisfied with the traditional program that they drop out of school hopeful of finding satisfaction in employment only to face the discouragement that comes when they realize that they are totally unprepared for the type of work that interests them.

The Eighth and Ninth Grade Pre-Technical-Vocational Program was introduced last year to meet the needs of students who exhibit interest and ability in vocationally oriented fields, but who are not achieving at their expected level. One of the principal purposes of this program is to encourage students to remain in school as long as possible, and to take advantage of the opportunities available through this eighth and ninth grade program as well as the pre-technical-vocational program in the tenth, eleventh, and twelfth grades.

DESCRIPTION

Approximately 300 students were in this program last year, which is a part of the vocational program in the two high schools and is correlated with vocationally oriented academic subjects of English, math, science, and social science. Eighth grade students are introduced to a variety of occupational areas and from these a choice of two will be made for more concentrated study during the ninth grade. The entire curriculum in the eighth and ninth grades is planned for preparing the students for entry into the regular vocational program.

The idea is to provide the eighth grade students with all kinds of information on possibilities for future education and to broaden their occupational horizons and concepts about work. At this age-grade level, students are introduced to the variety of jobs that are available to them, what they pay, what training is required, and what future they hold. There is no attempt to force a vocational choice; the aim is to provide a bridge from elementary school to the high school vocational-technical program.

The program in the ninth grade is vocational in that the students and parents will have made a vocational choice for further concentrated study as a result of the eighth grade exploratory program, a series of tests administered during the eighth grade, and through consultation with the vocational guidance counselor.

A six-week workshop for both the academic and vocational teachers was held prior to the opening of school last year to familiarize them with the manpower needs, working conditions, employment opportunities and job entry requirements of the local businesses and industries. Representatives from six local industries attended the workshop and discussed these points with the teachers. Six field trips to local industries were also included.

The balance of the time allotted for the workshop was devoted to developing the philosophy, stating the objectives, and developing courses of study and teaching materials.

A four-week workshop is planned for this summer for those teachers in the program. Emphasis will be placed on curriculum revision and ways of identifying problems of the individual and approaches to helping him overcome these problems.

WASHINGTON

The most recent innovative activity in the State of Washington has to do with a mobile grocery checker program. It is now under development and will utilize a tractor and trailer donated by the industry in the state. The trailer will be outfitted in an appropriate manner to conduct checker training with the usual supermarket materials, and the unit with an instructor will be made available to all parts of the state. In this fashion we will be able to move into some areas of the state with limited training resources, as well as provide opportunities for the citizens in that community to prepare themselves for jobs in the grocery business whenever appropriate.

The industry is applauding this development, saying that their turn-over in grocery checkers is high enough so that such a mobile program will probably become a permanent aspect of the state's activity.

In the area of mobile activity, while nothing yet has been implemented, there is considerable thought being given to a mobile vocational guidance unit that would be used to augment the resources of school districts, particularly in our more remote areas.

WEST VIRGINIA

The development of the Marion County Vocational-Technical Center located in Fairmont, West Virginia provided vocational educators a challenge. The availability of a building, the concern for a broad-based program, and an interest in doing something new created an opportunity to explore the cluster concept as a program possibility.

The study of the local and area labor market indicated a need for training in areas related to electrical and electronic occupations. Further investigation resulted in a program project proposal that would involve between eighty and 120 high school students. The program was organized into five areas. The first area covered twelve weeks of basic instruction for all enrolled students. Upon conclusion of this phase each student selected his next phase. He could choose commercial electricity, industrial electricity, radio and television repair, or electronic technology.

The student finds his capability level through his performance. The selection process was simplified to student interest, completion of tenth grade and teacher-student conferences during the initial phase. No paper and pencil tests were utilized.

The facility was designed to accommodate the four programs with close proximity. The shops and laboratories were equipped to emphasize the basic content obtained through an analysis of the occupations peculiar to a level of ability indicated in the entry occupations.

The program is still under study, but it has been worth the time spent.

WISCONSIN

PROGRAM EVALUATION

Wisconsin has always placed an emphasis on the development of post-secondary vocational and technical education programs. This is a most difficult area of vocational and technical education because the student body is voluntary and attendance is dependent on quality and placement. We realized in the early sixties that some method of program approval and evaluation must be used to insure quality in program and full placement of graduates. We were familiar with E.C.P.D. but did not use them for several reasons. First, it is expensive; second, E.C.P.D. is controlled by the private schools whose administrators are not interested in public vocational and technical schools.

The legislature had authorized the State Board to grant the Associate Degree for successful completion of two years in a technical program which had been evaluated and approved under procedures established by the State Board. Traditionally, we have extensively used advisory committees for program development and improvement. We adopted some E.C.P.D. procedures in making single program evaluations. The procedure is as follows. A technical institute has had State Board approval for the development of a program in a specific technology. The program has been in operation for two years and the local board wishes approval to grant the Associate Degree in the technical program.

Under guidelines which have been developed, the local director makes application for an evaluation to authorize the Associate Degree. The State Director then assigns state staff members to review the program to determine if it is ready for evaluation. If the supervisor's report is favorable, an evaluation committee is appointed by the State Director. The committee is composed of a management representative from a business or industry employing graduates, a state staff member, a local supervisor or teacher in the technology concerned, a representative of an institution of higher education, a representative of labor, and a representative of the State Employment Service. The school in which the program is being evaluated pays the travel expenses of the committee members. No honorarium is paid committee members who are pleased to serve without pay.

The committee meets with the school director and department head of the program being evaluated the evening before to review a self-evaluation study made by the school. The next day is spent reviewing the facility, equipment and the instruction materials; and interviews are held with the instructors and students. A member of our staff writes the committee's report based on recommendations made by the members. The report is reviewed and amended as needed by each committee member. The report includes recommendations to the State Director regarding action to be taken on approval of the programs. When the procedure was initiated, about 50 per cent of the reports contained conditions which delayed State Board approval until these conditions were met. The local directors now realize the standards which must be met and most reports now contain a minimum of conditions.

Our evaluation procedure has resulted in:

1. Involvement of business, industry, agriculture, labor and management in vocational-technical education;
2. Guarantees to the student that the program provides quality instruction; and
3. Upgrading of total school staff.

Authorization to grant the Associate Degree does not complete the school's responsibility. Continuing re-evaluations are made by the State Office to insure future quality in instruction.

WYOMING

VESTIBULE TRAINING FOR HEAVY EQUIPMENT OPERATION AND MAINTENANCE

Vestibule training for Heavy Equipment Operation and Maintenance was recently completed as a pilot project over a six-week period.

The program was sponsored by the joint training committee representing the Operating Engineers Local and Associated General Contractors, in cooperation with a local public school system and the State Department of Education. The Division of Vocational-Technical Education was involved in the planning and development of the curriculum.

Member companies of the Associated General Contractors (A.G.C.) provided instructors in basic mechanics, welding, safety and actual equipment operation during the tuition-free six-week course. Service representatives and specialists were sent in from such places as Cleveland, Ohio and Seattle, Washington, by several large equipment manufacturers and oil companies to give demonstrations and conduct training sessions.

The sixteen trainees, ranging in age from eighteen to thirty-seven, were selected from applicants all over the state. Some of the applicants were referrals from the Department of Public Welfare.

A completion ceremony and luncheon was sponsored by the A.G.C. for thirteen of the trainees who completed. Each trainee was presented with a completion certificate and a bright red safety helmet.

Every effort was made to make the training realistic and apparently the project was very successful because jobs were offered by eight different contractors to all thirteen who completed. The trainees will continue their training as apprentices in either heavy equipment operation or maintenance.

A local school administered the program, and we employed the services of the school's vocational agriculture teacher to coordinate the program.

The actual dollar cost of the program was under $2,000 and this was a very good investment, considering the starting rate was $3.24 for the trainees who completed the program.

We are planning a comprehensive follow-up of the trainees; however, at this point we are excited by the apparent success of the program and are looking at similar possibilities in other industries.